MIKON-2014 Gdańsk - Program

MIKON-2014 ORAL SESSION **Monday, June 16, 2014 8:30 - 10:10**

M1A. Antenna Design, Modeling and Measurements **Session Co-Chairs: N. Voitovich, W. Zieniutycz** **GDAŃSKA (room A)**		
M1A.1	**Comparing the Simulated and Measured Results of a Pneumatically Controlled Antenna**	**M. Okoniewski, B. Wu, C. Hayden** *(University of Calgary, Canada)*
M1A.2	**Critical Aspects Adversely Affecting Accuracy of Radiation Pattern and Polarization Measurements with Three Spherical Scanners at High Microwave Frequencies**	**A. Byndas, P. Kabacik** *(Wroclaw University of Technology, Poland)*
M1A.3	**Dual polarization antennas for UHF RFID readers**	**D. Duraj, K. Nyka, M. Rzymowski** *(Gdansk University of Technology, Poland)*
M1A.4	**Null-Steering in Two-Element Time Modulated Linear Antenna Array Through Pulse-Delay Approach**	**G. Bogdan, P.R. Bajurko, Y. Yashchyshyn** *(Warsaw University of Technology, Poland)*
M1A.5	**K band Spiral Antennas Conjugated with a Metal Waveguide**	**M. Khruslov, N. Popenko, I. Ivanchenko** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*

MIKON-2014 ORAL SESSION **Monday, June 16, 2014 8:30 - 10:10**

M1B. Microwave Filters **Session Co-Chairs: Y. Prokopenko, R. Snyder** **ZDROJOWA (room B)**		
M1B.1	**Microwave Filter Tuning for Different Center Frequencies Based on Artificial Neural Network and Phase Compensation**	**T. Kacmajor, P. Kant, J. Michalski** *(SpaceForest Ltd., Poland)*
M1B.2	**Myths in microwave filter theory**	**A. Abramowicz** *(Warsaw University of Technology, Poland)*
M1B.3	**Shaping Frequency Characteristics of Wideband Direct-Coupled Resonator Filters by Means of Electric and Magnetic Couplings**	**M. Zukocinski, A. Golaszewski, A. Abramowicz** *(Warsaw University of Technology, Poland)*
M1B.4	**Ultra-Compact Evanescent Mode Filter using Inhomogeneous Semi-Lumped Capacitive Elements**	**S. Bastioli, R. Snyder** *(RS Microwave Company Inc., USA)*
M1B.5	**Compact Microstrip Bandpass Filter with Tunable Notch**	**S. Christensen, V. Zhurbenko, T.K. Johansen** *(Technical University of Denmark, Denmark)*

MIKON-2014 ORAL SESSION **Monday, June 16, 2014 8:30 - 10:10**

M1C. Material Measurements **Session Co-Chairs: N. Cherpak, J. Dobrowolski** **DOMINIKAŃSKA (room F)**		
M1C.1	**Applicability of the transmission-reflection method for broadband characterization of seawater permittivity in a semi-open coaxial test cell**	**W. Wiatr** *(Warsaw University of Technology, Poland)*
M1C.2	**Investigations of Tunability of Ferroelectric Ceramic-Polymer Composites**	**K. Godziszewski, Y. Yashchyshyn, E. Pawlikowska, M. Szafran** *(Warsaw University of Technology, Poland)*
M1C.3	**WGM Resonator-Based Measurement Technique for Weakly and Highly Absorbing Substances**	**N. Cherpak, A. Barannik, A. Gubin** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*
M1C.4	**Multichannel measurement system for non-destructive testing of carbon-fiber-reinforced polymer composites**	**P. Korpas, B. Salski, S. Reszewicz** *(Warsaw University of Technology, Poland)*
M1C.5	**New Techniques of Measurement Parameters of Thin Semiconductor Layers by means of Microwave Photonic Crystals**	**D. Usanov, A. Skripal, D. Ponomarev, E. Latysheva** *(Saratov State University named after N.G. Chernyshevsky, Russia)*, **S. Nikitov** *(Kotelnikov Institute of Radio Engineering and Electronics of RAS, Russia)*

MIKON-2014 ORAL SESSION **Monday, June 16, 2014 8:30 - 10:10**

M1D. Applications **Session Co-Chairs: D. Usanov, W. Wiatr** **OLIWSKA (room D)**		
M1D.1	**Using EO Satellite Data in Safe City and Coastal Zone Web-GIS**	**K. Bruniecki, A. Stepnowski, M. Moszynski, Z. Lubniewski, K. Drypczewski, L. Markiewicz, M. Kulawiak, T. Bielinski** *(Gdansk University of Technology, Poland)*
M1D.2	**Particle Filter Modification using Kalman Optimal Filtering Method as Applied to Road Detection from Sattelite Images**	**J. Demkowicz** *(Gdansk University of Technology, Poland)*
M1D.3	**Simulation of subpixel image processing in optical monitoring systems**	**S. Fabirovskyy, I. Prudyus, V. Tkachenko, L. Lazko** *(Lviv Polytechnic National University, Ukraine)*
M1D.4	**Development of Signal Processing Techniques for Through-Wall Imaging Radar Systems**	**M. Unal, A.S. Turk, A. Caliskan, M. Orhan, M. Ozdemir** *(Yildiz Technical University, Turkey)*
M1D.5	**The long-range radio relay system utilizing the phenomenon of troposphere scattering**	**A. Lewandowski** *(Warsaw University of Technology, Poland)*

MRW-2014 PLENARY SESSION **Monday, June 16, 2014 10:40 - 12:20**

MPL1. Opening Session **Session Co-Chairs: Y. Bobalo, J. Modelski** **SCANDIC HOTEL**		
INV1.1	**Six-Port Based Direction Finding and Ranging (invited paper)**	**A. Koelpin, R. Weigel** *(University of Erlangen-Nuremberg, Germany)*
INV1.2	**Study of the Space by Low-Frequency Radio Telescopes (invited paper)**	**O. Konovalenko, V. Zakharenko** *(Institute of Radio Astronomy of NASU, Ukraine)*

MIKON-2014 POSTER SESSION **Monday, June 16, 2014 12:20 - 13:50**

MP. Antennas, Modeling and CAD Technology **Session Co-Chairs: M. Andriychuk, M. Mazur** **FOYER (MEZZANINE)**		
MP.1	**An Array Antenna With A High Division Ratio Wilkinson Power Dividers**	**M. Gasztold** *(Bumar Elektronika S.A., Poland)*
MP.2	**Antenna array excited by the radial waveguide**	**E. Sedek** *(Bumar Elektronika S.A., Poland)***, A. Jeziorski** *(Military University of Technology, Poland)*
MP.3	**Asymptotic Solution for Bragg Reflection and Mode Conversion in Nonperiodic Corrugated Circular Waveguide**	**V. Borulko** *(Oles Honchar Dnipropetrovsk National University, Ukraine)*
MP.4	**Beamforming of the metalized dielectric disk antenna with the off-axis excitation**	**S. Radionov, M. Khruslov, I. Ivanchenko, N. Popenko** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*
MP.5	**Bimodal dielectric disk antenna**	**S. Radionov, I. Ivanchenko, N. Popenko** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*
MP.6	**Design Issues of the Composites CAE System**	**M. Lobur, I. Farmaga, P. Shmigelskyi, O. Halushko** *(Lviv Polytechnic National University, Ukraine)*
MP.7	**Dielectric resonator filters-pushing off spourios modes**	**R. Borowiec** *(Wroclaw University of Technology, Poland)*

MP.8	**Solutions Improve Signal Processing In Digital Satellite Communication Channels**	**J.M. Boiko, A.I. Eromenko** *(Khmelnitsky National University, Ukraine)*
MP.9	**A Dual-band Microstrip Antenna using a T-shaped Parasitic Element**	**J.-W. Kim, H.-J. Ham, J.-M. Woo** *(Chungnam National University, Korea)***, D.-K. Lee** *(Agency for Defense Development, Korea)*
MP.10	**Effect of Time Varying Measurement Conditions on Antenna Pattern in Near Field Measurement and Its Correction Procedure**	**M. Mazur, W. Marynowski, A. Kusiek, W. Zieniutycz** *(Gdansk University of Technology, Poland)*
MP.11	**Extraction of antenna pattern from near field antenna measurements distorted by undesired emission**	**M. Mazur, W. Marynowski, A. Kusiek, W. Zieniutycz** *(Gdansk University of Technology, Poland)*
MP.12	**Neural Network-based Information Technology for Biomedical Signal Processing**	**S. Shatnyi** *(Lviv Polytechnic National University, Ukraine)*
MP.13	**Planar Dipole Antenna for Radar Application**	**M. Pergol, L. Babski** *(Bumar Elektronika S.A., Poland)*
MP.14	**The broadband antenna with frequency scanning**	**A. Schekaturin, D. Kovalchuk** *(Sevastopol National Technical University, Ukraine)*
MP.15	**Simulation of multibeam acoustic waves interference in plane-parallel coatings for MEMS**	**P. Kosoboutskyy, D. Lizanets, M. Lobur** *(Lviv Polytechnic National University, Ukraine)*
MP.16	**The Problems of Ultra Wide Band Antennas Design for High Resolution Radar Application**	**Y. Yashchyshyn, K. Derzakowski, P.R. Bajurko** *(Warsaw University of Technology, Poland)*
MP.17	**Investigation of A Special Feature of Plasma Column: Nested Plasma Antenna**	**S. Bonde, V. Ghiye, A. Dhande** *(Pune Institute of Computer Technology, India)*
MP.18	**Defected Ground Filters for High Isolation Radar Transciever Antennas**	**I. Samy, A.A. Gamal, M.A. Abdalla** *(Military Technical College, Egypt)*
MP.19	**Size Reduction for a Triple Band GSM-GPS-WiFi Meta-matrial Front End Antenna**	**A. Foad, M. Khaled, M.A. Abdalla** *(Military Technical College, Egypt)*

MIKON-2014 ORAL SESSION **Monday, June 16, 2014 13:50 - 15:30**

M2A. Antenna Arrays **Session Co-Chairs: M. Balaban, M. Okoniewski** **BURSZTYNOWA (room C)**		
M2A.1	**Linear Microstrip Array for Monopulse Radar**	**M. Wnuk, M. Bugaj** *(Military University of Technology, Poland)*
M2A.2	**Design of Microstrip Antenna Subarrays: A Simulation-Driven Surrogate-Based Approach**	**A. Bekasiewicz, W. Zieniutycz** *(Gdansk University of Technology, Poland)***, S. Koziel, S. Ogurtsov** *(Reykjavik University, Iceland)*
M2A.3	**Enhanced Switched Parasitic Antenna with Switched Active Monopoles for Indoor Positioning Systems**	**M. Rzymowski, K. Nyka, L. Kulas** *(Gdansk University of Technology, Poland)*
M2A.4	**Slot Antenna Array on Circular SIW Resonator for On Body Communication**	**Z. Raida, V. Hebelka** *(Brno University of Technology, Czech Republic)*
M2A.5	**Reflection Phase Analysis based on Multilayer Perceptron Network Model for Unit Element Design of a Dual-Layered Microstrip Reflectarray**	**S. Nesil** *(The Scientific and Technological Research Council Of Turkey, Turkey),* **F. Gunes, S. Demirel** *(Yildiz Technical University, Turkey)*

MIKON-2014 ORAL SESSION **Monday, June 16, 2014 13:50 - 15:30**

M2B. Passive Devices I **Session Co-Chairs: A. Abramowicz, Z. Raida** **DOMINIKAŃSKA (room F)**		
M2B.1	**Single-Layer Coupled-Line Magic-Ts Utilizing Left-Handed Transmission Line Sections**	**J. Sorocki, I. Piekarz, I. Slomian, S. Gruszczynski, K. Wincza** *(AGH University of Science and Technology, Poland)*
M2B.2	**Analysis and Design of Complex Impedance Transforming Marchand Baluns**	**R. Michaelsen, T. Johansen** *(Technical University of Denmark, Denmark)***, K. Tamborg** *(Weibel Scientific A/S, Denmark)*
M2B.3	**Application of 'C' Section Based Left-Handed Transmission Lines for Coupling Enhancement of Coupled-Line Directional Couplers**	**I. Piekarz, J. Sorocki, I. Slomian, S. Gruszczynski, K. Wincza** *(AGH University of Science and Technology, Poland)*
M2B.4	**Microstrip Line Transformator Design by Transverse Resonanse Technique**	**Y. Rassokhina, V. Krizhanovski** *(Donetsk National University, Ukraine)*

M2C. Microwave Measurements Session Co-Chairs: A. Jelenski, T. Lee MARIACKA (room E)		
M2C.1	**Calibration of the Measurement System Using Picoseconds Pulses**	**P.R. Bajurko** *(Warsaw University of Technology, Poland)*
M2C.2	**Development of Phase Meters Based on AD8302 and CPLD for Microwave Interferometer**	**M. Varavin, J. Zajac, F. Zacek** *(Institute of Plasma Physics AS CR v.v.i., Czech Republic)*, **A. Vasilyev, A. Varavin, G. Ermak** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*, **S. Nanobashvili** *(Andronikashvili Institute of Physics, Georgia)*
M2C.3	**General Method of Seven-Term Statistical Calibration with Partially Defined Standards**	**P. Barmuta, A. Lewandowski, W. Wiatr** *(Warsaw University of Technology, Poland)*, **S. Liu, D. Schreurs** *(Catholic University of Leuven, Belgium)*
M2C.4	**Investigation of Polarization Back-Scattering Characteristics of Metal Cube in Sub-THz Frequency Range by the Quasi-optical Waveguide Modeling Method**	**S. Mizrakhy, P. Nesterov** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*
M2C.5	**Instrument Function of Microwave Spectrometers: Estimation by Quasisolution Technique**	**E. Alekseev, A. Mescheryakov** *(Institute of Radio Astronomy of NASU, Ukraine)*, **M. Andreev, O. Drobakhin** *(Oles Honchar Dnipropetrovsk National University, Ukraine)*

M2D. Electromagnetic Compatibility Session Co-Chairs: H. Jahja, J. Kolakowski OLIWSKA (room D)		
M2D.1	**Theoretical Aspects of Antiradar Body Protection by Surfaces with Impedance and Dielectric Coatings**	**B. Katsenelenbaum** *(Nahariya, Israel)*, **N. Voitovich** *(Ya. S. Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Ukraine)*
M2D.2	**Angular and spectral characteristics of a wideband microwave absorber**	**M. Olszewska-Placha, B. Salski, W. Gwarek** *(Warsaw University of Technology, Poland)*
M2D.3	**Evaluation of Shielding Effectiveness of Slotted Enclosures by Internal Stirring**	**A. Rusiecki** *(Plum Ltd., Poland)*, **K. Aniserowicz** *(Bialystok University of Technology, Poland)*
M2D.4	**Analysis of Differences in Results of Measurements and Calculations of Slotted Enclosure Shielding Effectiveness**	**A. Rusiecki** *(Plum Ltd., Poland)*, **K. Aniserowicz** *(Bialystok University of Technology, Poland)*
M2D.5	**Practical Guidelines for the Design and Implementation of Microwave Absorber Using FSS-Frequency Selective Surfaces**	**M.B. Weber, L.C. Kretly** *(University of Campinas, Brazil)*, **S.E. Barbin** *(University of Sao Paulo, Brazil)*

MIKON-2014 ORAL SESSION **Monday, June 16, 2014 16:00 - 17:40**

M3A. Components for Microwave Systems Session Co-Chairs: M. Pospieszalski, A.S. Turk GDAŃSKA (room A)		
M3A.1	**Multi-Beam and Multi-Range Antenna Array For 24 GHz Radar Applications**	**I. Slomian, P. Kaminski, J. Sorocki, I. Piekarz, K. Wincza, S. Gruszczynski** *(AGH University of Science and Technology, Poland)*
M3A.2	**Small Sleeve Dipole Antenna Using Inner Short Stub**	**S.-C. Jung, Y.-S. Choi, J.-M. Woo** *(Chungnam National University, Korea)*
M3A.3	**Accuracy Enhancement of a Split-Ring Resonator Liquid Sensor Using Dielectric Resonator Coupling**	**N. Meyne, C. Cammin, A.F. Jacob** *(Hamburg University of Technology, Germany)*
M3A.4	**Dielectric TM mode resonator with improved spurious response**	**H. Jahja, P. Jedrzejewski** *(Ericsson AB, Sweden)*
M3A.5	**Compact Tunable Dual-Band Filter with Mixed Coupling**	**C. Gai, X.-W. Zhu, W. Hong** *(Southeast University, China)*

MIKON-2014 ORAL SESSION **Monday, June 16, 2014 16:00 - 17:40**

M3B. Computational Techniques Session Co-Chairs: A. Kucharski, I. Starkov ZDROJOWA (room B)		
M3B.1	**Propagation in metamaterials and causality (Contribution to recent discussion in the IEEE Microwave Magazine) (invited paper)**	**W. Gwarek** *(Warsaw University of Technology, Poland)*
M3B.2	**Automated Design of Linear Phase Filters**	**N. Leszczynska, L. Szydlowski, M. Mrozowski** *(Gdansk University of Technology, Poland)*
M3B.3	**The SIE-MoM Analysis of Mixed Vertical-Horizontal Metallization Inside Uniform Waveguides**	**B. Bieda, P. Slobodzian** *(Wroclaw University of Technology, Poland)*
M3B.4	**A 3D-FEM Mesh Technique for Fast Analysis of Waveguide Problems Containing Rotatable Tuning Elements**	**G. Fotyga, P. Bielski, K. Nyka** *(Gdansk University of Technology, Poland)*

MIKON-2014 ORAL SESSION **Monday, June 16, 2014 16:00 - 17:40**

M3C. Amplifiers **Session Co-Chairs: P. Colantonio, B. Galwas** **DOMINIKAŃSKA (room F)**		
M3C.1	**System level characterization and digital predistortion of GaN MMIC Doherty power amplifiers for microwave point-to-point radios**	**V. Camarchia, G. Ghione, M. Pirola, R. Quaglia** *(Polytechnic University of Turin, Italy)*, **P. Colantonio, F. Giannini, R. Giofre, L. Piazzon** *(University of Rome Tor Vergata, Italy)*
M3C.2	**K-Band Power Amplifiers in a 100 nm GaN HEMT Microstrip Line MMIC Technology**	**C. Friesicke, A.F. Jacob** *(Hamburg University of Technology, Germany)*, **R. Quay** *(Fraunhofer Institute for Applied Solid State Physics IAF, Germany)*
M3C.3	**A Tuning Method for the Post-Processing Optimization of the Doherty Power Amplifier Frequency Band**	**L. Piazzon, R. Giofre, P. Colantonio, F. Giannini** *(University of Rome Tor Vergata, Italy)*
M3C.4	**1.3 GHz Power Amplifier Design Using a Measurement-Based Transistor Package Model**	**G. Snawadzki, A. Lewandowski** *(Warsaw University of Technology, Poland)*, **G. Avolio, D. Schreurs** *(Catholic University of Leuven, Belgium)*
M3C.5	**A 2-Watt, 0.15- µm GaAs pHEMT Stacked Amplifier at 22 GHz**	**T. Fersch, R. Weigel** *(University of Erlangen-Nuremberg, Germany)*, **R. Quaglia, M. Pirola, G. Ghione, V. Camarchia** *(Polytechnic University of Turin, Italy)*

MIKON-2014 ORAL SESSION **Tuesday, June 17, 2014 8:30 - 10:10**

T1A. Passive Devices II **Session Co-Chairs: N. Popenko, K. Wincza** **DOMINIKAŃSKA (room F)**		
T1A.1	**Local-Global Space Mapping for Rapid EM-Driven Design of Compact RF Structures**	**A. Bekasiewicz** *(Gdansk University of Technology, Poland)*, **S. Koziel** *(Reykjavik University, Iceland)*
T1A.2	**Microstrip Ring Resonator Based Frequency Reconfigurable Band-Pass Filters at K-Band**	**B. Rohrdantz, V. Schmidt, A. Jacob** *(Hamburg University of Technology, Germany)*
T1A.3	**Modeling of parameters of composite metal-polymer systems**	**I. Kharabet, D. Tatarchuk, Y. Didenko, I. Patsora** *(National Technical University of Ukraine - KPI, Ukraine)*
T1A.4	**Derivation of Coupler and Power Sensing Requirements for High Linearity and Efficiency Tunable Power Amplifiers**	**H. Cebi, O. Bayat** *(Istanbul Kemerburgaz University, Turkey)*

MIKON-2014 ORAL SESSION **Tuesday, June 17, 2014 8:30 - 10:10**

T1B. Analytical and Numerical Techniques **Session Co-Chairs: O. Nosich, P. Slobodzian** **OLIWSKA (room D)**		
T1B.1	**Analytical Crossing Lines Modeling**	**T.V. Dinh, D. Pasquet, P. Descamps, D. Lesenechal** *(National Graduate School of Engineering & Research Center - LaMIPS, France)***, J. Pagazani, G. Lissorgues** *(The School of Technological Innovation - ESIEE, France)***, P. Nicole** *(Thales Systemes Aeroportes S.A., France)*
T1B.2	**Simulation of liquid thermal expansion effect for wireless passive microfluidic temperature sensor**	**O. Faitas, O. Matviykiv** *(Lviv Polytechnic National University, Ukraine)*
T1B.3	**Diffraction of electromagnetic wave on skin blood vessel: statement of the problem**	**I. Starkov, Z. Raida** *(Brno University of Technology, Czech Republic)***, A. Starkov** *(Saint Petersburg National Research University of Information Technologies, Mechanics and Optics, Russia)*
T1B.4	**Nonuniform Transmission Line Matching Circuits Synthesis – Analytical versus Optimization Approach**	**P. Miazga** *(Warsaw University of Technology, Poland)*

MIKON-2014 ORAL SESSION **Tuesday, June 17, 2014 8:30 - 10:10**

T1C. Antennas and EM Wave Scattering **Session Co-Chairs: O. Konovalenko, E. Sedek** **GDAŃSKA (room A)**		
T1C.1	**Accurate Numerical Study of Electromagnetic Wave Scattering by a Dielectric-Covered Graphene Disk**	**M. Balaban** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*
T1C.2	**Backscattering from Planar Spiral Antennas**	**Z. Shen** *(Nanyang Technological University, Singapore)***, Y. Shang, S. Xiao** *(University of Electronic Science and Technology of China, China)*
T1C.3	**Creating Media with Prescribed Permeability Using the Asymptotic Solution to EM Wave Scattering Problem**	**A. Ramm** *(Kansas State University, USA)***, M. Andriychuk** *(Ya. S. Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Ukraine)*
T1C.4	**Pattern Compensation for DOA Estimation by Electromagnetic Vector Sensors**	**Y. Lu, L. Huang** *(Nanyang Technological University, Singapore)*
T1C.5	**Solution of the Antenna Placement Problem by Means of Global Optimization Techniques**	**M. Ural, C. Bayseferogullari** *(ASELSAN A.S., Turkey)*

MIKON-2014 PLENARY SESSION **Tuesday, June 17, 2014 10:40 - 12:20**

TPL1. Plenary Session - MIKON **Session Co-Chairs: W. Gwarek, D.M. Vavriv** **GDAŃSKA (room A)**		
INV2.1	**Conductive Graphene Nanoribbon (GNR) Thin Film as Anti-icing /De-icing Heater (invited paper)**	**V. Volman** *(Newtown, USA)*, **J. Tour, A.-R. Raji** *(Rice University, USA)*, **Y. Zhu** *(University of Akron, USA)*
INV2.2	**Overview of electromagnetic transducers with radar interrogation for passive wireless sensors applications (invited paper)**	**P. Pons, H. Aubert** *(Laboratory for Analysis and Architecture of Systems - CNRS, France)*, **M. Tentzeris** *(Georgia Institute of Technology, USA)*
INV2.3	**Inkjet-printed "Zero-Power" Wireless Sensor and Power Management Nodes for IoT and "Smart SKin" Applications" (invited paper)**	**M. Tentzeris, S. Kim, R. Vyas** *(Georgia Institute of Technology, USA)*, **A. Traille, P. Pons, H. Aubert** *(Laboratory for Analysis and Architecture of Systems - CNRS, France)*, **A. Georgiadis, A. Collado** *(The Telecommunications Technology Centre of Catalonia, Spain)*

MIKON-2014 POSTER SESSION **Tuesday, June 17, 2014 12:20 - 13:50**

TP. Microwave and Optical Components, Devices, Applications and EMC **Session Co-Chairs: V. Fesenko, K. Nyka** **FOYER (MEZZANINE)**		
TP.1	**360° Variable Microwave Phase Shifter Design for Clutter Cancellation Circuitry of Life Detecting Radar**	**N. Takbiri, A. Oncu (Bogazici University, Turkey), R. Dasbasi** *(Miltek Milimetrik Teknolojiler R&D Ltd. Co., Turkey)*
TP.2	**A 250 W RF Pulse Power Source for Linear Accelerator**	**D. Rosolowski, W. Wojtasiak, D. Gryglewski** *(Warsaw University of Technology, Poland)*
TP.3	**The Comparison of JADE Based DOA Estimation Methods for Unknown Noncoherent Source Groups Containing Coherent Signals with Frequency Matching**	**A. Aminu, M. Secmen, S. Poyraz** *(Yasar University, Turkey)*
TP.4	**An Improved Design of Wideband Wilkinson Power Divider with Stubs for Wireless Communication Application**	**M.A. Abdullah, N. Seman, D.N. Abang Zaidel, K.H. Yusof** *(University of Technology, Malaysia)*
TP.5	**Anomalous Scattering of Light by Finite Clusters of Silver Nanowires Containing Periodicity**	**D. Natarov** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*
TP.6	**Broadband Miniaturized Butler Matrix Utilizing Left-Handed Transmission Lines**	**K. Staszek, P. Kaminski, A. Rydosz, K. Wincza, S. Gruszczynski** *(AGH University of Science and Technology, Poland)*
TP.7	**Calculation of Quality Factor of Tunable Shielded Cylindrical Metal-Dielectric Resonator Using Mode Matching Technique**	**K. Savin, P. Sergienko, I. Golubeva, Y. Prokopenko** *(National Technical University of Ukraine - KPI, Ukraine)*

TP.8	**Efficient Compensation Methods for Modal Dispersion in Radio over Multimode Fiber Links**	**T. Cseh, T. Berceli** *(Budapest University of Technology and Economics, Hungary)*
TP.9	**Electromagnetic characterization of composites with conductive inclusions**	**B. Salski, M. Krysicki, M. Bryla, D. Janczak, M. Jakubowska** *(Warsaw University of Technology, Poland)*
TP.10	**Ellipticity parameters of an electromagnetic wave reflected from the layered structure located on the semiconductor substrate**	**V. Baibak, A. Bulgakov** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)***, I. Fedorin** *(National Technical University "KhPI", Ukraine)*
TP.11	**EMC requirements for equipment used in the Polish Army - Impact of changes the NO-06-A500:2012 standard on the measuring results**	**R. Przesmycki, R. Kubacki** *(Military University of Technology, Poland)*
TP.12	**Triangular pulses in normally dispersive optical fibers**	**S. Iakushev** *(Kharkiv National University of Radioelectronics, Ukraine)***, V. Fesenko** *(Institute of Radio Astronomy of NASU, Ukraine)***, I. Sukhoivanov, O. Shulika** *(University of Guanajuato, Mexico)*
TP.13	**High-Selectivity Microstrip Bandpass Filter with Notch-Band for Wideband Wireless Applications**	**H. Shaman, S. Almorqi, A. Alamoudi** *(King Abdulaziz City for Science and Technology, Saudi Arabia)*
TP.14	**Load network design technique for microwave class-F amplifier**	**A. Yefymovych, V. Krizhanovski** *(Donetsk National University, Ukraine)***, R. Giofre, P. Colantonio** *(University of Rome Tor Vergata, Italy)*
TP.15	**Natural Modes of an Active Slab Microcavity with Air-Filled Periodic Inclusions**	**V. Byelobrov** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)***, T. Benson** *(University of Nottingham, UK)*
TP.16	**New Concept of Low-Noise and Low-Drift PLL Synthesizer Based on Composite Phase Detector**	**P. Gontarek, M. Zukocinski, K. Antoszkiewicz** *(Warsaw University of Technology, Poland)***, F. Ludwig** *(German Electron Synchrotron, Germany)*
TP.17	**Waveguide structure with electrically controlled characteristics of Allowed and Forbidden Bands**	**D. Usanov, A. Skripal, A. Frolov** *(Saratov State University named after N.G. Chernyshevsky, Russia)***, S. Nikitov** *(Kotelnikov Institute of Radio Engineering and Electronics of RAS, Russia)*
TP.18	**Reshaping and Capturing Nonlinear Electromagnetic and Linear Electron 2D Waves in Lossy Graphene Metamaterials. Graphene Solid-State Electron Optics**	**Y. Rapoport** *(Taras Shevchenko National University of Kyiv, Ukraine)***, V. Grimalsky, G. Castrejon-M., S. Koshevaya** *(Technological University of Morelos, Mexico)*
TP.19	**The Design of Ultra Wideband Six-Port Network by using Ground-Slotted Technique**	**K.H. Yusof, N. Seman, M.H. Jamaluddin, D.N. Abang Zaidel, M.A. Abdullah** *(University of Technology, Malaysia)*
TP.20	**EMI Filter Design to Comply with Military Standards**	**H.C. Aksoy** *(ASELSAN A.S., Turkey)*
TP.21	**Digital Television Broadcast -Based Passive Radar Research and Development**	**L. Dudas** *(Budapest University of Technology and Economics, Hungary)***, P. Renner** *(HungaroControl, Hungary)***, R. Seller, T. Peto** *(Budapest University of Technology and Economics, Hungary)*

MRW-2014 PLENARY SESSION **Tuesday, June 17, 2014 13:50 - 15:30**

TPL2. Space Technologies - Joint Plenary Session - MIKON & IRS **Session Co-Chairs: M. Mrozowski, H.Rohling** **GDAŃSKA (room A)**		
INV3.1	**A Golden Age for Spaceborne SAR Systems (invited paper)**	**A. Moreira** *(German Aerospace Center, Germany)*
INV3.2	**RADAR Modular Technologies - Key building blocks for flexible satellite design (invited paper)**	**P. Messidoro, F. Impagnatiello, A. Torre, P. Capece, F. Marchetti** *(Thales Alenia Space, Italy)*
INV3.3	**Rosetta, a cornerstone mission of ESA: objectives, instruments and the Polish contribution (invited paper)**	**M. Banaszkiewicz, J. Grygorczuk, W. Marczewski, A. Bialek, R. Wawrzaszek** *(Space Reserch Center of Polish Academy of Sciences, Poland)*

MIKON-2014 WORKSHOP **Tuesday, June 17, 2014 13:50 - 15:30**

WRK. Workshop. Design of Reconstruction Filters for Class-S PAs **Session Chair: K. Blau** **MARIACKA (room E)**		
WRK.1	**The Appropriate Design of the Reconstruction Filter and its Influence on the Output Power and Efficiency of Class-S and Quasi Class-S Power Amplifiers**	**K. Blau** *(Technical University of Ilmenau, Germany)***, E. Serebryakova** *(IL Metronic Sensortechnik GmbH, Germany)*

MIKON-2014 ORAL SESSION **Tuesday, June 17, 2014 16:00 - 17:40**

T3A. Photonics and Metamaterials **Session Co-Chairs: T. Berceli, C. Sabah** **ZDROJOWA (room B)**		
T3A.1	**Fiber Bragg Gratings Based Tuning of an Optoelectronic Oscillator**	**K. Madziar, B. Galwas, T. Osuch** *(Warsaw University of Technology, Poland)*
T3A.2	**Polarization Mode Dispersion and Phase Noise Effects in Optical OFDM Links**	**G. Fekete, T. Berceli** *(Budapest University of Technology and Economics, Hungary)*
T3A.3	**Ultra-Sensitive Dual-Band Metamaterial Absorber Based on Symmetric Resonators**	**C. Sabah** *(Middle East Technical University, Turkey)*, **F. Dincer, M. Karaaslan, E. Unal** *(Mustafa Kemal University, Turkey)*
T3A.4	**The Analysis of the Impact of the Incident Electromagnetic Wave on the Coaxial Pigtailed Packaged Laser Diode Characteristics**	**A. Lysiuk, Y. Yashchyshyn** *(Warsaw University of Technology, Poland)*
T3A.5	**Tuning the Electric Resonance of a Metamaterial Based Single-Sided S-Shaped Resonator**	**M. Karaali** *(Mustafa Kemal University, Turkey)*, **T. Nesimoglu, C. Sabah** *(Middle East Technical University, Turkey)*

MIKON-2014 ORAL SESSION **Tuesday, June 17, 2014 16:00 - 17:40**

T3B. Special Polish-Italian Session. Space Research **Session Co-Chairs: M. Banaszkiewicz, F. Giannini** **DOMINIKAŃSKA (room F)**		
T3B.1	**Selex ES GaN Technology improvements, results and R&D approach for Defense and Space application**	**A. Pantellini, C. Lanzieri, P. Romanini, A. Nanni** *(Selex ES S.p.A, Italy)*, **P. Colantonio, F. Giannini, E. Limiti** *(University of Rome Tor Vergata, Italy)*
T3B.2	**JUICE - ESA mission to Jupiter and the Polish contribution**	**H. Rothkaehl, M. Morawski, J. Grygorczuk** *(Space Reserch Center of Polish Academy of Sciences, Poland)*
T3B.3	**POLFAR - Polish incarnation of LOFAR. Scintific objectives and system realization**	**A. Krankowski, L. Blaszkiewicz** *(University of Warmia and Mazury, Poland)*, **K. Otmianowska-Mazur, M. Soida** *(Astronomical Observatory of the Jagiellonian University, Poland)*, **H. Rothkaehl, B. Atamaniuk** *(Space Reserch Center of Polish Academy of Sciences, Poland)*
T3B.4	**The COSMO SkyMed Family: Status of play and evolution**	**M.C. Comparini** *(Telespazio S.p.A., Italy)*, **F. Imagnatiello** *(Thales Alenia Space, Italy)*
T3B.5	**Dependability modeling of dynamically reconfigurable space equipment**	**R. Graczyk, P. Orleanski** *(Space Reserch Center of Polish Academy of Sciences, Poland)*, **M. C. Palau** *(Astri Polska Sp. z o.o., Poland)*, **K. Pozniak** *(Warsaw University of Technology, Poland)*

MIKON-2014 ORAL SESSION **Tuesday, June 17, 2014 16:00 - 17:40**

T3C. CAD and Simulations **Session Co-Chairs: A.F. Jacob, A. Lamecki** **GDAŃSKA (room A)**		
T3C.1	**Radiation Boundary Conditions: A New Semi-Analytical Approach**	**I. Starkov, Z. Raida** *(Brno University of Technology, Czech Republic)*, **A. Starkov** *(Saint Petersburg National Research University of Information Technologies, Mechanics and Optics, Russia)*
T3C.2	**Accurate Design of Pseudoelliptic Inline SIW Filters with Frequency-Dependent Couplings**	**A. Jedrzejewski, L. Szydlowski, M. Mrozowski** *(Gdansk University of Technology, Poland)*
T3C.3	**Kernel Execution Strategies for GPU-accelerated version of Method of Moments**	**A. Noga, T. Topa** *(Silesian University of Technology, Poland)*
T3C.4	**Integral Equations and Sophisticated Moment Method in the Scattering of the Terahertz Plane Waves of Two Polarizations by a Grating of Graphene Strips**	**A. Matsushima** *(Kumamoto University, Japan)*, **T. Zinenko, A. Nosich** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*
T3C.5	**Development of Ultrawide Band Reflector Antennas and Adaptive SAR Algorithms for Near Zone Surveillance Radar**	**A.S. Turk, M.D. Senturk** *(Yildiz Technical University, Turkey)*, **S.K. Uslu, M.C. Oztap** *(Turkish Air Force Academy, Turkey)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 8:30 - 10:10**

W1A. Radar Technology **Session Co-Chairs: B.A. Kochetov, Y. Lu** **ZDROJOWA (room B)**		
W1A.1	**A Wireless Crane to Vessel Locating System for Sea Swell Compensation**	**A. Nikolaiev, F. Kirsch, M. Vossiek** *(University of Erlangen-Nuremberg, Germany)*, **X. Shu, C. Bohn (Clausthal University of Technology, Germany), H. Duden** *(ep4 offshore GmbH, Germany)*
W1A.2	**Moving Target Detection with Multi-Look SAR**	**O. Bezvesilniy, B. Kochetov, D. Vavriv** *(Institute of Radio Astronomy of NASU, Ukraine)*
W1A.3	**Combinational RFID-based Localization Using Different Algorithms and Measurements**	**D. Savochkin** *(Sevastopol National Technical University, Ukraine)*
W1A.4	**PWVD Resolution Considerations for LFMCW Signal Detection by WHT**	**T.O. Gulum, A. Erdogan, K.K. Guner, L. Durak-Ata, T. Yildirim** *(Yildiz Technical University, Turkey)*, **P.E. Pace** *(Naval Postgraduate School, USA)*
W1A.5	**Restoration of Aliased Average Doppler Spectra**	**S. Sosnytskiy** *(Institute of Radio Astronomy of NASU, Ukraine)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 8:30 - 10:10**

W1B. Multiband and Wideband Antennas **Session Co-Chairs: P. Kabacik, J.M. Woo** **GDAŃSKA (room A)**		
W1B.1	**Frequency range widening of the microstrip antenna with the Sierpinski fractal patterned metamaterial structure**	**S. Lamari, R. Kubacki, M. Czyzewski** *(Military University of Technology, Poland)*
W1B.2	**An Analysis of Fourier Spectrograms of Different Ultra-wideband Signals for Radio Systems**	**G. Czawka, M. Garbaruk, N. Litwinczuk** *(Bialystok University of Technology, Poland)*
W1B.3	**A Novel Structure of Broadband Wire Antenna With Orthogonal Polarization in UHF and VHF Bands**	**P. Piasecki, J. Strycharz** *(Bumar Elektronika S.A., Poland)*
W1B.4	**Power and Polarization Patterns of a Circularly Polarized Four-Dipole Radiator with a Square Screen**	**O. Gorobets, N. Yeliseyeva, M. Gorobets** *(V.N. Karazin Kharkiv National University, Ukraine)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 8:30 - 10:10**

W1C. Active Devices **Session Co-Chairs: M.C. Comparini, F. Gunes** **DOMINIKAŃSKA (room F)**		
W1C.1	**Optimized Biasing Condition for High Efficiency Power Amplifier based on Cascode Cell**	**L. Piazzon, R. Giofre, S. D'Andrea, F. Giannini** *(University of Rome Tor Vergata, Italy)*
W1C.2	**61GHz Millimeter Wave Voltage Variable Attenuator Based on Flip-Chip Mounted PIN-Diodes**	**S. Mann, F. Lurz, S. Lindner, F. Barbon, S. Linz, R. Weigel, A. Koelpin** *(University of Erlangen-Nuremberg, Germany)*
W1C.3	**A Deterministic Approach for Designing Flat Gain Ultra-Wideband LNAs**	**M.A. Belen, F. Gunes, S. Demirel, P. Mahouti** *(Yildiz Technical University, Turkey)*
W1C.4	**Efficient Scattering Parameter Modeling of a Microwave Transistor Using Generalized Regression Neural Network**	**P. Mahouti, F. Gunes, S. Demirel, A. Uluslu, M.A. Belen** *(Yildiz Technical University, Turkey)*
W1C.5	**Highly Efficient and Wideband Harmonically Tuned GaN-HEMT Power Amplifier**	**M.T. Arnous, P. Saad, S. Preis, Z. Zhang** *(Technical University of Berlin, Germany)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 10:40 - 12:20**

W2A. Wireless and Personal Communication I **Session Co-Chairs: M. Amanowicz, H. Shaman** **GDAŃSKA (room A)**		
W2A.1	**A multi-building WiFi-based indoor positioning system**	**K. Gorski, M. Groth, L. Kulas** *(Gdansk University of Technology, Poland)*
W2A.2	**Concept and System Analysis of Wideband Transmit Front-Ends for High Data Rate Communication Systems at W-Band**	**M. Giese, C. Friesicke, A. Jacob** *(Hamburg University of Technology, Germany)*
W2A.3	**Enhancing the Input Bandwidth of CMOS Track and Hold Amplifiers**	**G. Tretter, D. Fritsche, C. Carta, F. Ellinger** *(Dresden University of Technology, Germany)*
W2A.4	**UWB positioning system architecture based on paired anchor nodes**	**A. Badawika, J. Kolakowski** *(Warsaw University of Technology, Poland)*
W2A.5	**Multicriteria Optimization in Planning of Mobile Communication Networks**	**V. Bezruk, D. Chebotareva, S. Ivanenko** *(Kharkiv National University of Radioelectronics, Ukraine)*, **M. Jo** *(Korea University, Korea)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 10:40 - 12:20**

W2B. Planar Antennas **Session Co-Chairs: S.E. Barbin, W. Krzysztofik** **DOMINIKAŃSKA (room F)**		
W2B.1	**Antenna Properties Improvement by Means of Modern Technology - Metamaterials as a Modified Substrate and/or Superstrate**	**W. Krzysztofik** *(Wroclaw University of Technology, Poland)*
W2B.2	**Antenna Signature: A Qualitative Analysis of Planar Antennas by Electromagnetic Scanning Using TDR-Time Domain Reflectometry**	**A.S. Ferreira, L.C. Kretly** *(University of Campinas, Brazil)*, **S.E. Barbin** *(University of Sao Paulo, Brazil)*
W2B.3	**Equivalent Circuits of Planar Filtering Antennas Fed by Apertures**	**M. Kufa, Z. Raida** *(Brno University of Technology, Czech Republic)*, **J. Mateu** *(Polytechnic University of Catalonia, Spain)*
W2B.4	**Low-Cost Multi-Objective Optimization Yagi-Uda Antenna in Multi-Dimensional Parameter Space**	**A. Bekasiewicz, W. Zieniutycz** *(Gdansk University of Technology, Poland)*, **S. Koziel** *(Reykjavik University, Iceland)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 10:40 - 12:20**

W2C. Active Devices - Noise Aspects **Session Co-Chairs: M.C. Comparini, D. Pasquet** **OLIWSKA (room D)**		
W2C.1	**On Noise Properties of Transistors and Amplifiers A Critical Review (invited paper)**	**M. Pospieszalski** *(National Radio Astronomy Observatory, USA)*
W2C.2	**Reduction of harmonics and noise of microwave oscillators**	**G. Meszaros, T. Berceli** *(Budapest University of Technology and Economics, Hungary)*
W2C.3	**Analytical Extraction of the Noise Sources Characteristics of an SiGe HBT**	**D. Pasquet, P. Descamps, D. Lesenechal** *(National Graduate School of Engineering & Research Center - LaMIPS, France)*
W2C.4	**Low Flicker Noise High Linearity Direct Conversion Mixer for K-Band Applications in a 90 nm CMOS Technology**	**M. Ali, A. Hamidian, A. Malignaggi, M.T. Arnous** *(Technical University of Berlin, Germany)*, **G. Boeck** *(Ferdinand-Braun-Institut, Germany)*
W2C.5	**A Broadband Low-Noise Receiver Front End with Ultrawide Bandwidth**	**V. Volkov, D. Vavriv, E. Bulakh, A. Kravtsov** *(Institute of Radio Astronomy of NASU, Ukraine)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 10:40 - 12:20**

W2D. Terahertz Technology I **Session Co-Chairs: Q.J. Hui, Y. Yashchyshyn** **ZDROJOWA (room B)**		
W2D.1	**Stabilization of unstable states (invited paper)**	**V. Buts** *(Kharkov Institute of Physics and Technology, Ukraine)*
W2D.2	**Gyrotron Technique and Technology**	**M. Hruszowiec, E. Plinski, T. Wieckowski, W. Czarczynski** *(Wroclaw University of Technology, Poland)*
W2D.3	**Terahertz Spatial-Harmonic Magnetrons Development**	**M. Avtomonov, V. Naumenko, D. Vavriv** *(Institute of Radio Astronomy of NASU, Ukraine)*, **K. Schunemann** *(Hamburg University of Technology, Germany)*
W2D.4	**Differential Phase Sections Based on Form Birefringence Effect Operating in the Terahertz Frequency Range**	**V. Bezborodov, O. Kosiak, Y. Kuleshov** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*, **V. Yachin** *(Institute of Radio Astronomy of NASU, Ukraine)*
W2D.5	**How to achieve a homogeneous sensitivity in THz detector arrays**	**M. Sakhno, J. Gumenjuk-Sichevska, F. Sizov** *(V. Ye. Lashkaryov Institute of Semiconductor Physics of NASU, Ukraine)*

WP. Wireless Technology, Sensors and Measurements

Session Co-Chairs: A. Lewandowski, G. Czawka

FOYER (MEZZANINE)

WP.1	**A Comparison of Two Practical Methods for Measurement of the Dielectric Constant of LTCC Substrates**	**B. Barteczka, P. Slobodzian, J. Macioszczyk, L. Golonka** *(Wroclaw University of Technology, Poland)*
WP.2	**A Novel Algorithm for Channel Segmentation based on a Lloyd-Max quantization**	**C. Weber, A. Christ, T. Felhauer, L. Schuessele** *(University of Applied Sciences Offenburg, Germany)*
WP.3	**A Trust-based Information Assurance Mechanism for Military Mobile Ad-hoc Networks**	**M. Amanowicz, J. Glowacka, K. Parobczak, J. Krygier** *(Military University of Technology, Poland)*
WP.4	**Electromagnetic Modeling, Development and Application of X-shaped Analyzers of Complex Reflection Coefficient**	**V. Karlov** *(Oles Honchar Dnipropetrovsk National University, Ukraine)*
WP.5	**Energy Losses Analysis of Charged Particle Moving in Inhomogeneous Medium**	**A. Dormidontov, Y. Prokopenko, S. Khankina, V. Yakovenko** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*
WP.6	**K Modeled Turbulence and Nonlinear Clipping for QAM OFDM with FSO and Fiber Serially Linked**	**H. Nistazakis, A. Stassinakis, G. Tombras** *(National and Kapodistrian University of Athens, Greece)*, **S. Muhammad** *(National University of Computer and Emerging Sciences, Pakistan)*, **A. Tsigopoulos** *(Hellenic Naval Academy, Greece)*
WP.7	**Exact Modal Absorbing Boundary Condition for Waveguide Simulations - Discrete Green's Function Approach**	**M. Wiktor** *(Medical University of Gdansk, Poland)*, **T. Stefanski** *(Gdansk University of Technology, Poland)*
WP.8	**Integrated Software Environment for High-Frequency Metrology**	**A. Lewandowski, M. Kotz, P. Barmuta, A. Rychter, M. Fijolek, W. Wiatr** *(Warsaw University of Technology, Poland)*
WP.9	**Ionospheric Electron Density Profiles Derived from Obliquely Sounded HF Radar**	**Y.-M. Lee, J.-H. Jo, M.-H. You, C.-O. Jeong** *(Electronics and Telecommunications Research Institute, Korea)*
WP.10	**I/Q-Demodulation of the Odd Order**	**V. Slyusar** *(Central Research Institute of Armaments and Military Equipment of Ukraine's Armed Forces, Ukraine)*
WP.11	**Measurement of Dielectric Material Properties Using Coupled Biconical Resonators**	**O. Drobakhin, M. Andreev, D. Saltykov** *(Oles Honchar Dnipropetrovsk National University, Ukraine)*
WP.12	**OpenGL Accelerated Method of the Material Matrix Generation for FDTD Simulations**	**S. Orlowski, T. Stefanski** *(Gdansk University of Technology, Poland)*
WP.13	**Signal Peculiarities of Autodyne Systems of Short-Range Radar at Target Vibrations**	**V. Noskov** *(Ural Federal University, Russia)*, **G. Ermak, A. Vasilyev** *(O.Ya. Usikov Institute for Radiophysics and Electronics of NASU, Ukraine)*
WP.14	**Systematic Procedure for Load-Pull X-parameters Measurements for High-efficiency GaN HEMT PA Design**	**P. Zawada, P. Barmuta, A. Lewandowski** *(Warsaw University of Technology, Poland)*, **T. Nielsen** *(Agilent Technologies, Denmark)*, **D. Schreurs** *(Catholic University of Leuven, Belgium)*

WP.15	**The Design Methodology of Integrated Active-Passive Radiomonitoring System**	**I. Prudyus, L. Lazko, D. Mymrikov** *(Lviv Polytechnic National University, Ukraine)*, **A. Zubkov** *(Army Academy named after hetman Petro Sahaydachyi, Ukraine)*
WP.16	**Tracking quality measurements of Ground Station for Low Earth Orbit Satellite.**	**M. Stolarski** *(Space Reserch Center of Polish Academy of Sciences, Poland)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 13:50 - 15:10**

	W3A. Sensors and UHF Technology **Session Co-Chairs: A. Koelpin, B. Smolski** **ZDROJOWA (room B)**	
W3A.1	**THz/sub-THz direct detector challenges: rectification and thermal detectors for active imaging (invited paper)**	**F. Sizov, V. Reva, O. Golenkov, V. Petriakov, A. Shevchik-Shekera, S. Korinets, M. Sakhno, I. Lysiuk, V. Zabudsky, S. Bunchuk** *(V. Ye. Lashkaryov Institute of Semiconductor Physics of NASU, Ukraine)*, **S. Dvoretskii** *(Rzhanov Institute of Semiconductor Physics of SB RAS, Russia)*
W3A.2	**Passive RFID System for 2D Indoor Positioning**	**A. Savochkin, Y. Mickhayluck, V. Iskiv, A. Schekaturin, A. Lukyanchikov, D. Savochkin** *(Sevastopol National Technical University, Ukraine)*, **E. Levin** *(LEDS Inc., Canada)*
W3A.3	**Selftest Strategies for Microwave Interferometry for High-Precision Industrial Distance Measurements**	**A. Koelpin, S. Linz, F. Barbon, S. Lindner, S. Mann, F. Lurz, R. Weigel** *(University of Erlangen-Nuremberg, Germany)*
W3A.4	**Detection of UWB Pulses with Ultra-fast Comparators**	**J. Kolakowski** *(Warsaw University of Technology, Poland)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 13:50 - 15:10**

	W3B. Industral and Medical Application **Session Co-Chairs: R. Kubacki, A. Stepnowski** **OLIWSKA (room D)**	
W3B.1	**Dosimetry for biological tissues exposed to ultra-wideband microwave signals**	**R. Kubacki, E. Cwalina, S. Lamari** *(Military University of Technology, Poland)*, **J. Sobiech** *(Military Institute of Hygiene and Epidemiology, Poland)*
W3B.2	**Effects of applying a frequency and phase-shift efficiency optimisation algorithm to a solid-state microwave oven**	**P. Korpas, A. Wieckowski, M. Krysicki** *(Warsaw University of Technology, Poland)*
W3B.3	**Human Movement and Biological Functions Monitoring Using Ultrawideband Signals**	**P.R. Bajurko, Y. Yashchyshyn** *(Warsaw University of Technology, Poland)*
W3B.4	**RF Indoor Positioning System Supported by Wireless Computer Vision Sensors**	**P. Woznica, M. Tarkowski, M. Plotka, L. Kulas** *(Gdansk University of Technology, Poland)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 13:50 - 15:10**

W3C. Wireless and Personal Communication II **Session Co-Chairs: S. Gruszczynski, A. Nikolaiev** **GDAŃSKA (room A)**		
W3C.1	**The Impact of Frequency Conversion on the Measurement Performance of Digital Receivers**	**T. Filipek** *(Warsaw University of Technology, Poland)*
W3C.2	**The performance of the algorithm for automatic FEC codes recognition**	**L. Nowosielski, M. Wnuk** *(Military University of Technology, Poland)*
W3C.3	**Dynamic Spectrum Sharing Algorithm for Combined Mobile Networks**	**M. Jo** *(Korea University, Korea)***, M. Klymash, T. Maksymyuk, R. Ruslan Kozlovskiy** *(Lviv Polytechnic National University, Ukraine)*

MIKON-2014 ORAL SESSION **Wednesday, June 18, 2014 13:50 - 15:10**

W3D. Terahertz Technology II **Session Co-Chairs: W. Heinrich, F. Sizov** **DOMINIKAŃSKA (room F)**		
W3D.1	**Towards to make universal device for doing experiments with new generation structures in terahertz band**	**O. Denisov** *(State Research Center of Superconductive Radioelectronics "Iceberg", Ukraine)***, Q.J. Hui , Q. Jjaran, L. Chen** *(Harbin Institute of Technology, China)*
W3D.2	**Accuracy Enhancement of Material Characterization in Sub-THz Range**	**P. Piasecki** *(Bumar Elektronika S.A., Poland)***, K. Godziszewski, Y. Yashchyshyn** *(Warsaw University of Technology, Poland)*
W3D.3	**Integral-differential models of characteristic functions of 3D terahertz FMCW radar**	**M. Kosovets, O. Pavlov** *(National Technical University of Ukraine - KPI , Ukraine)*, **L. Tovstenko** *(V.M. Glushkov Institute of Cybernetics of NASU, Ukraine)*

MRW-2014 PLENARY SESSION **Wedenesday June 18, 2014 15:10 - 15:40**

WPL1. Closing Session. Young Scientists Awards Ceremony **Session Chair: J. Modelski** **GDAŃSKA (room A)**

Workshop – MIKON 2014, Tuesday, June 13:50, room E (MARIACKA)

Filter Design for Class-S Amplifiers

The Appropriate Design of the Reconstruction Filter and its Influence on the Output Power and Efficiency of Class-S and Quasi Class-S Power Amplifiers

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Abstract – The aim of this workshop is a more or less complete analysis of reconstruction filters for current mode class-S and partial of quasi class-S power amplifier systems. The workshop attempts to show and to discuss the requirements for reconstruction filters suitable for class-S (delta-sigma or pulse-length modulation) and quasi class-S (band-pass pulse-length modulation) power amplifier systems. Regarding the final stage architecture representing the main interface to the reconstruction filter all deliberations are focused on the current-mode power amplifier system because at given maximum ratings of the transistors this architecture generates the highest output power. Very crucial to the maintenance of the rectangular shape of the drain current and thus to high efficiency are not only the choice of the pass-band and stop-band of the reconstruction filter, but also the specification of input impedance for different modes of excitation over a wide frequency range.

The main focus of the workshop is on the design of the reconstruction filter. It will be shown that the electrical and geometrical constraints for the design of a reconstruction filter are well satisfied by balanced input comb-line filters. Especially doubly and singly terminated filters are subjected to theoretical consideration, simulation, testing and measurement. Several filter architectures are demonstrated, and critically analysed in terms of differential and common mode impedances. Finally the simulation and measurement results of current mode class-S power amplifier systems and a single ended quasi class-S power amplifier system including appropriate designed reconstruction filters are shown.